

<b>FORM PTO-1449</b> US Patent and Trademark Office		US DEPARTMENT OF COMMERCE		Docket No. <b>088799.2</b>	Application No. <b>10/759,222</b>		
<b>INFORMATION DISCLOSURE CITATION</b> <b>in an Application</b> (Use several sheets if necessary)				Applicant <b>Rolf Joachim Mehlhorn</b>			
<div style="border: 2px solid black; border-radius: 50%; padding: 10px; display: inline-block; text-align: center;"> <b>PTO</b>  <b>JUN 21 2007</b>  <b>US PATENT AND TRADEMARK OFFICE</b> </div>				Filing Date <b>January 20, 2004</b>			
				Group Art Unit <b>1615</b>			
<b>U.S. PATENT DOCUMENTS</b>							
Examining Officer's Initial	Examining Officer's No.	Document Number	Date of Patent	Name	Class	Subclass	Filing Date if Appropriate
/KW/	A1	3,522,346	7/28/70	Chang et al.			
/KW/	A2	3,804,776	4/16/74	Kenichiro Yazawa et al.			
/KW/	A3	3,993,754	11/23/76	Rahman et al.			
/KW/	A4	4,053,585	10/11/77	Allison et al.			
/KW/	A5	4,217,344	8/12/80	Vanlerberghe et al.			
/KW/	A6	4,235,871	11/25/80	Papahadjopoulos et al.			
/KW/	A7	4,241,046	12/23/80	Papahadjopoulos et al.			
/KW/	A8	4,244,816	1/13/81	Vogler et al.			
/KW/	A9	4,263,428	4/21/81	Apple et al.			
/KW/	A10	4,310,505	1/12/82	Baldeschwieler et al.			
/KW/	A11	4,330,534	5/18/82	Sakurai et al.			
/KW/	A12	4,331,654	5/25/82	Morris			
/KW/	A13	4,356,167	10/26/82	Kelly			
/KW/	A14	4,397,846	8/9/83	Weiner et al.			
/KW/	A15	4,411,894	10/25/83	Schrank et al.			
/KW/	A16	4,427,649	1/24/84	Dingle et al.			
/KW/	A17	4,438,052	3/20/84	Weder et al.			
/KW/	A18	4,515,736	5/7/85	Deamer			
/KW/	A19	4,619,794	10/28/86	Hauser			
/KW/	A20	4,769,250	9/6/88	Forssen			
/KW/	A21	4,946,683	8/7/90	Forssen			
/KW/	A22	5,077,056	12/31/91	Bally et al.			
/KW/	A23	5,192,549	3/9/93	Barenolz et al.			

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/KW/	A24	5,204,112	4/20/93	Hope et al.			
/KW/	A25	5,616,341	4/1/97	Mayer et al.			
<b>U.S. PATENT APPLICATION PUBLICATION DOCUMENTS</b>							
Examiner Initial	Ref. No.	Document Number	Date of Publication	Name	Class	Subclass	Filing Date if Appropriate
	A26						
<b>FOREIGN PATENT DOCUMENTS</b>							
Examiner Initial	Ref. No.	Document Number	Date of Publication	Country	Class	Subclass	Translation Abstract
							Yes No
/KW/	B1	EP 0 088 046	9/7/83	EPO			X
/KW/	B2	WO 86/01102	2/27/86	WIPO			
/KW/	B3	WO 88/06442	9/7/88	WIPO			
<b>OTHER DOCUMENTS</b> (Including Author, Title, Date, Pertinent Pages, etc.)							
/KW/	C1	Ball et al., "Electron Spin Resonance Studies of Ionic Permeability Properties of Thylakoid Membranes of <i>Beta vulgaris</i> and <i>Avicennia germinans</i> ", Plant Physiol. 78, pp 1-3 (1985).					
/KW/	C2	Bally et al., "Uptake of safranin and other lipophilic cations into model membrane systems in response to a membrane potential", Elsevier Science Publishers, pp. 66-75 (1985).					
/KW/	C3	Bielski et al., "A Study of the Reactivity of HO <sub>2</sub> /O <sub>2</sub> - with Unsaturated Fatty Acids", The J. of Biological Chem. vol. 258, no. 8, pp. 4759-4761 (1983).					
/KW/	C4	Belkin et al., "Proton Gradients in Intact Cyanobacteria," Plant Physiol. 84, pp. 25-30 (1987).					
/KW/	C5	Blumwald et al., "Ionic Osmoregulation during Salt Adaptation of the Cyanobacterium <i>Synechococcus</i> 6311," Plant Physiol. 73, pp. 377-380 (1983).					
/KW/	C6	Blumwald et al., "Studies of osmoregulation of salt adaptation of cyanobacteria with ESR spin-probe techniques," Proc. Natl. Acad. Sci. USA 80, pp. 2599-2602 (1983).					
/KW/	C7	Cramer et al., "NMR STUDIES OF pH-INDUCED TRANSPORT OF CARBOXYLIC ACIDS ACROSS PHOSPHOLIPID VESICLE MEMBRANES," Biochem and Biophys Research Communications 75, No. 2, pp. 295-301 (1977).					
/KW/	C8	Cafiso et al., "Estimation of Transmembrane pH Gradients from Phase Equilibria of Spin-Labeled Amines," Biochemistry 17, p. 3871-3877 (1978).					
/KW/	C9	Cafiso et al., "Estimation of Transmembrane Potentials from Phase Equilibria of Hydrophobic Paramagnetic Ions," Biochemistry 17, pp. 187-195 (1978).					
/KW/	C10	Cafiso et al., "Electrogenic H <sup>+</sup> /OH <sup>-</sup> Movement Across Phospholipid Vesicles Measured by Spin-Labeled Hydrophobic Ions," Biophys. J., Biophysical Society 44, pp. 49-57 (1983).					
/KW/	C11	Candau et al., "ESR Measurements of Bioenergetic Parameters Inside Intact Cells of <i>Anacystis Nidulans</i> ," Elsevier Science Publishing Co., Inc., pp. 91-101 (1983).					
/KW/	C12	Cullis et al., "pH gradients and membrane transport in liposomal systems," Elsevier Science Publishers Ltd. pp. 268-272 (1991).					
/KW/	C13	Chapman, "Lipid Dynamics In Cell Membranes," Univ. of Sheffield England, Ch. 2, 2 pgs. no date.					
/KW/	C14	Casey et al., "Active Proton Uptake by Chromaffin Granules: Observation by Amine Distribution and Phosphorus-31 Nuclear Magnetic Resonance Techniques," ATP Dependent PH Changes in Chromaffin Granules, 6 pgs. no date.					
/KW/	C15	Deamer, et al., "THE RESPONSE OF FLUORESCENT AMINES TO pH GRADIENTS ACROSS LIPOSOME MEMBRANES," <i>Biochimica et Biophysica ACTA</i> 274, pp. 323-335 (1972).					

/Kevin Weddington/ (11/23/2007)

/KW/	C16	Barenholz et al., "Liposomes as Pharmaceutical Dosage Forms," Encyclopedia of pharmaceutical technology, 9, pp. 1-39 (1994).
/KW/	C17	Driscoll, "Catecholamine Analogs as Potential Antitumor Agents," J. of Pharm. Sciences 68, No. 12, pp. 1519-1521 (1979).
/KW/	C18	Driscoll, et al., "Psychotropic Drugs as Potential Antitumor Agents: A Selective Screening Study," Cancer Treat Rep 62, pp. 45-74 (1978).
/KW/	C19	Fendler "Optimizing Drug Entrapment in Liposomes. Chemical and Biophysical Considerations," Liposomes in Bio Systems, John Wiley & Sons, Ltd., pp. 87-101 (1980).
/KW/	C20	Garcia et al., "Mechanism of Lactose Translocation in Proteoliposomes Reconstituted with <i>lac</i> Carrier Protein Purified from <i>Escherichia coli</i> . 1. Effect of pH and Imposed Membrane Potential on Efflux, Exchange, and Counterflow," Biochemistry 22, pp. 2524-2531 (1983).
/KW/	C21	Haran et al., "Transmembrane ammonium sulfate gradients in liposomes produce efficient and stable entrapment of amphipathic weak bases," Biochimica et Biophysica Acta, 93, pp. 201-215 (1993).
/KW/	C22	Hargreaves et al., "Liposomes from Ionic, Single-Chain Amphiphiles," Monoalkyl Liposomes, American Chem. Society, 17, No. 18, pp. 3759-3768 (1978).
/KW/	C23	Johnson, et al., "Internal pH of Isolated Chromaffin Vesicles," The J. of Bio Chem, 251, No. 7, pp. 2189-2191 (1976).
/KW/	C24	Kano et al., "PYRANINE AS A SENSITIVE pH PROBE FOR LIPOSOME INTERIORS AND SURFACES: pH GRADIENTS ACROSS PHOSPHOLIPID VESICLES," Biochimica et Biophysica Acta, 509, pp. 289-299 (1978).
/KW/	C25	Kirby et al., "THE EFFECT OF LIPID COMPOSITION OF SMALL UNILAMELLAR LIPOSOMES CONTAINING MELPHALAN AND VINCRIStINE ON DRUG CLEARANCE AFTER INJECTION INTO MICE," Biochem. Pharma. 32, No. 4, pp. 609-615 (1983).
/KW/	C26	Kornberg et al., "Measurement of Transmembrane Potentials in Phospholipid Vesicles," Proc. Nat. Acad. Sci, USA 69 No. 6, pp. 1508-1513 (1972).
/KW/	C27	Lepock, et al., "SPIN LABELS FOR CELL SURFACES," Febs Letters 60, No. 1, pp. 185-189 (1975).
/KW/	C28	Li et al., "Doxorubicin physical state in solution and inside liposomes loaded via a pH gradient," Biochimica et Biophysica Acta 1415, pp. 23-40 (1998).
/KW/	C29	Lin et al., "DETERMINATION OF THE ELECTRIC POTENTIAL AT THE EXTERNAL AND INTERNAL BILAYER-AQUEOUS INTERFACES OF THE HUMAN ERYTHROCYTE MEMBRANE USING SPIN PROBES," Biochimica et Biophysica Acta 732, pp. 683-690 (1983).
/KW/	C30	Lomax et al., "Active auxin uptake by zucchini membrane vesicles: Quantitation using ESR volume and $\Delta$ pH determinations," Proc. Natl. Acad. Sci. USA 82, pp. 6541-6545 (1985).
/KW/	C31	Lomax et al., "Determination of osmotic volumes and pH gradients of plant membrane and lipid vesicles using ESR spectroscopy," Elsevier, Biochimica et Biophysica Acta 821, pp. 106-114 (1985).
/KW/	C32	Mayer et al., "Uptake of antineoplastic agents into large unilamellar vesicles in response to a membrane potential," Biochimica et Biophysica Acta 816, pp. 294-302 (1985).
/KW/	C33	Mayer et al., "TECHNIQUES FOR ENCAPSULATING BIOACTIVE AGENTS INTO LIPOSOMES," Chem. and Physics of Lipids 40, pp. 333-344 (1986).
/KW/	C34	Mehlhorn et al., "Measurements of Volumes and Electrochemical Gradients with Spin Probes in Membrane Vesicles," Methods in Enzymology 88, pp. 751-762 (1982).
/KW/	C35	Mehlhorn et al., "Light-Induced pH Gradients Measured with Spin-Labeled Amine and Carboxylic Acid Probes: Application to <i>Halobacterium halobium</i> Cell Envelope Vesicles," Academic Press, Inc., Methods in Enzymology 88, pp. 334-344 (1982).
/KW/	C36	Mehlhorn et al., "ESR studies of light-dependent volume changes in cell envelope vesicles from <i>Halobacterium halobium</i> ," Biochimica et Biophysica Acta 809, pp. 66-73, (1985).

/Kevin Weddington/ (11/23/2007)

/KW/	C37	Mehlhorn et al., "ESR SPIN LABEL PROBES OF TRANSMEMBRANE PROTON MOVEMENTS," Water and Ions in Biological Systems, Proc. Of Third International Conference, pp 167-173 (1985).
/KW/	C38	Mehlhorn et al., "Electron Spin Resonance Spin Destruction Methods for Radical Detection," Methods in Enzymology, 105, pp. 215-220 (1984).
/KW/	C39	Mehlhorn et al., "Measurements of Volumes and Light-Induced pH and Electrical Gradients in Sealed Membranes with Spin Probes," Proceedings of 5th International Photosynthesis Congress, Halkidiki, Greece, 10 pgs. (1980).
/KW/	C40	Mehlhorn et al., "BIOENERGETIC STUDIES OF CELLS WITH SPIN PROBES," UC Bioenergetics Group and Lawrence Berkeley Lab, pp. 180-189 (1983).
/KW/	C41	Mehlhorn, "THE INTERACTION OF IONIC DETERGENTS WITH SUBMITOCHONDRIAL MEMBRANES," Academic Press, Inc., Submitochondrial Membranes, pp. 381-387 (1976).
/KW/	C42	Mehlhorn et al., "INACTIVATION AND REACTIVATION OF MITOCHONDRIAL RESPIRATION BY CHARGED DETERGENTS," <i>Biochemica et Biophysica Acta</i> 423, pp. 382-397 (1976).
/KW/	C43	Mehlhorn, "LIGHT INDUCED TRANSMEMBRANE PROTON FLUXES ACROSS ENVELOPE VESICLES OF HALOBACTERIUM HALOBIVM MEASURED WITH SPIN PROBES," Abstract for: Biophysical Society, 23rd Annual Mtg, Atlanta, GA, (one page) (1979).
/KW/	C44	Melandri et al., "Light-Induced Proton Gradients and Internal Volumes in Chromatophores of <i>Rhodospseudomonas sphaeroides</i> ," <i>Archives of Biochemistry and Biophysics</i> 235, No. 1, pp. 97-105 (1984).
/KW/	C45	Miyamoto et al., "Preparation and Characteristics of Lipid Vesicles," <i>J. Membrane Biol.</i> 4, pp. 252-269 (1971).
/KW/	C46	Nichols et al., "CATECHOLAMINE UPTAKE AND CONCENTRATION BY LIPOSOMES MAINTAINING pH GRADIENTS," <i>Biochimica et Biophysica Acta</i> 455, pp. 269-271 (1976).
/KW/	C47	Or et al., "Carbon-13 NMR Studies of Salt Shock-Induced Carbohydrate Turnover in the Marine Cyanobacterium <i>Agmenellum quadruplicatum</i> ," <i>Plant Physiol.</i> 82, pp. 646-652 (1986).
/KW/	C48	Cullis et al., "Liposomes as Pharmaceuticals," Marcel Dekker, Inc., pp. 39-72 no date.
/KW/	C49	Probst, et al., "Light-Induced Ph Gradient Across <i>Halobacterium Halobium</i> Cell Envelope Vesicles Measured With Spin-Labeled Amine And Carboxylic Acid Probes," American Society of Photobiology, Asilomar, Pacific Grove, CA Lawrence Berkeley Lab, UC, (7th Annual), pp. 1-20 (1979).
/KW/	C50	Quintanilha et al., "pH GRADIENTS ACROSS THYLAKOID MEMBRANES MEASURED WITH A SPIN-LABELED AMINE," <i>FEBS Letters</i> , 91, No. 1, pp. 104-108 (1978).
/KW/	C51	Reinhold et al., "MEMBRANE TRANSPORT OF SUGARS AND AMINO ACIDS," <i>Ann. Rev. Plant Physiol</i> 35, pp. 45-83 (1984).
/KW/	C52	Rottenberg, "The Measurement of Membrane Potential and $\Delta$ pH in Cells, Organelles, and Vesicles," <i>Methods in Enzymology</i> vol. 1, pp. 547-569 (1979).
/KW/	C53	Shakhov et al., "RECONSTITUTION OF HIGHLY PURIFIED PHOTON-TRANSLOCATING PYROTHOSPHATASE," Published in <i>Biokhimiya</i> vol. 48, No. 8, pp. 1159-1163 (1983).
/KW/	C54	Shinbo et al., "Photoredox Reaction and Membrane Potential in the Liposome System," <i>J. Chem Society of Japan</i> 6, pp. 917-923 (1983).
/KW/	C55	Szoka, Jr., "COMPARATIVE PROPERTIES AND METHODS OF PREPARATION OF LIPID VESICLES (LIPOSOMES)," <i>Ann. Rev. Biophys. Bioeng.</i> 9, pp. 467-508 (1980).
/KW/	C56	Edit. Swarbrick et al., "Liposomes as Pharmaceutical Dosage Forms to Microencapsulation," Marcel Dekker, Inc., Library of Congress, Encyclopedia of pharma tech vol. 9, pp. 1-39 (plus front pages) (1994).
/KW/	C57	Todd et al., "Amine Spin Probe Permeability in Sonicated Liposomes," <i>J. Membrane Biol.</i> 109, pp. 53-64 (1989).
/KW/	C58	Todd et al., "Amine and Carboxylate Spin Probe Permeability in Red Cells," <i>J. Membrane Biol.</i> 109, pp. 41-52 (1989).

/Kevin Weddington/ (11/23/2007)

/KW/	C59	Tyrrell, et al., "NEW ASPECTS OF LIPOSOMES," <i>Biochimica et Biophysica Acta</i> 457, pp. 259-301 (1976).
/KW/	C60	Webb, et al., "Antibacterial Efficacy against an In Vivo <i>Salmonella typhimurium</i> Infection Model and Pharmacokinetics of a Liposomal Ciprofloxacin Formulation," <i>Am. Soc. Microbio, Antimicrobial Agents and Chemotherapy</i> 42, No. 1, pp. 45-52 (1998).
/KW/	C61	Yamafuji et al., "Antitumour Activity of Dopa, Dopamine, Noradrenalin or Adrenalin and their Reaction with Nucleic Acids," <i>Z. Krebsforsch.</i> 73, pp. 195-203 (1970).
EXAMINER /Kevin Weddington/ (11/23/2007)		DATE CONSIDERED
EXAMINER: Initial if references considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		